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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/224,202	12/30/1998	LANCE R. CARLSON	3123-233-1	3994

7590 11/17/2005

DAVID M. SIGMOND  
MAXTOR CORPORATION  
2452 Clover Basin Drive  
LONGMONT, CO 80503

EXAMINER

SNIEZEK, ANDREW L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/224,202

Applicant(s)

CARLSON ET AL.

Examiner

Andrew L. Sniezek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 87, 88, 92, 93, 97, 98, 102, 103, 108- 112, 115, 118-122, 125, 126 is/are rejected.
- 7) ☒ Claim(s) 47-50, 53-58, 61-66, 91, 94-96, 101, 104-106, 113, 123 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**Continuation of Disposition of Claims:** Claims pending in the application are 47-50,53-58,61-66,87,88,91-98,101-106,108-113,115,118-123,125 and 126.

### DETAILED ACTION

1. The following action is taken in view of applicants response filed 6/27/05 and upon further review by the examiner.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 87, 88, 93, 97, 98, 103, 110, 111, 120 and 121 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (4,777,544)

Re claim 87: Brown et al. teaches a disk drive comprising a disk (10, 12, 14) and a head (27) wherein as stated in column 7, lines 13-45 a track can contain interleaved wavelengths which are different from one another and a detection circuit (figure 6) which determines if a head is in an acceptable flying height (change in flying height) while the head is at a substantially constant flying height.

Re claim 93: It is noted that column 7, lines 13-45 indicate that **subsequently** a change in fly height can be made. This subsequent determination occurs at a non-predetermined flying height (zero clearance).

Re claim 88: Note wavelengths in column 7 are not stated as varying, therefor are deemed to be constant.

Re claim 97: The teaching of Brown et al. as discussed above is incorporated herein.

Additionally, "without moving the head to a substantially different flying height" is given

the same meaning as "while the head is at a substantially constant flying height" as set forth in claim 87, and is therefor satisfied as already explained.

Re claims 98 and 103: These limitations are the same as those discussed with respect to claims 88 and 93 and therefor satisfied for similar reasons.

Re claims 110, 111, 120 and 121: Clearly the wavelengths are recorded along a given track, which inherently contains user fields and therefor would satisfy the language adjacent user fields as claimed.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 92, 102, 108, 109, 112, 115, 118, 119, 122, 125 and 126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. in view of Gyi et al. The teaching of Brown et al. is discussed above and incorporated herein. Claims 92 and 102 further set forth that the signals are recorded in the servo field. Claims 112 and 122 seem to set forth similar limitations. Brown does not specify the exact location of the recorded signals. Gyi et al. teaches in a similar arrangement that two signals of different frequencies can be recorded in a servo area, spaced laterally across a track of a disk, to determine fly height. It would have been obvious to one of ordinary skill in the art at the time of the invention to look to the teaching of Gyi et al. to determine the exact location of the signals along a disk, given that Brown et al. does not specify the exact

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location, since both are concerned with the determination of acceptable fly heights of a head. The limitations of claims 108 and 118, relationship between the signals, and claims 109, 119 directed to the data patterns with respect to a track centerline are taught by Gyi et al. (figure 3) and would have been obviously incorporated in the arrangement of Brown et al. to determine fly height. The limitations of claims 115, 125 and 126 are obviously satisfied by the operation of the arrangement of Brown et al. and Gyi et al. as applied.

***Allowable Subject Matter***

6. Claims 47-50, 53-58, 61-66, 91, 94-96, 101, 104-106, 113 and 123 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The reasons for allowance of the above noted claims were provide in the office action mailed 7/16/01.

***Response to Arguments***

8. Applicant's arguments, see Appeal Brief, filed 6/27/05, with respect to the rejection(s) of claim(s) 47-50, 53-58, 61-66, 87, 88, 91-98, 101-106, 108-113, 115, 118-123, 125 and 126 under 35 U.S.C. 112 first paragraph have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection has been made.

### **EXAMINER COMMENTS**

9. Applicant points out that in Brown et al. that a reference fly height (zero clearance) must be used. This, as the Board of Patent Appeals previously pointed out is similar to applicants invention (threshold data). Additionally, although this is correct, there is nothing in column 7, lines 13-45 that indicates that the readings of the wavelengths occur at different fly heights. Lacking such a teaching, one would have to take the teaching as meaning that the readings of the wavelengths occur when the head is at a substantially constant flying height.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Sniezek whose telephone number is 571-272-7563. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

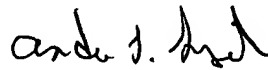
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID HUDSPETH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600



Andrew L. Sniezek  
Primary Examiner  
Art Unit 2651

A.L.S.  
11/14/05